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EXAMINER

NGUYEN, ANH T

ART UNIT PAPER NUMBER

2174

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/756,996

Applicant(s)

PARADIES, JAMES I.

Examiner

Anh T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>No.2:12/7/200</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-48 are presented for examination.

Specification

2. The disclosure is objected to because of the following informalities:
 - a) Page 4, line 4, “desirable provide”, should recite, --desirable to provide--
 - b) Page 4, line 19, “such the”, should recite, --such as--
 - c) Page 8, line 14, “of the in”, should recite, --of the processing operations--
 - d) Page 18, line 1, “is to followed”, should recite, --is to be followed--
 - e) Page 20, line 1, “set by to”, should recite, --set to--Appropriate corrections are required.

Claim Objections

3. The following claims are objected to because of the following informalities:
 - a) Claim 4, line 2, “attribute s”, should recite --attribute is--
 - b) Claim 17, line 12, “generate and”, should recite --generate an--
 - c) Claim 18, line 3, “attribute o”, should recite --attribute of--
 - d) Claim 33, line 6, “modal”, should recite --nodal--
line 14, “operations of in”, should recite --operations in--
line 16, “of said in an”, should recite --in a--Appropriate corrections are required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 10, 26, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation of “detecting deadlock conditions in said sequence” in the claims is unclear. Furthermore, there is no support for this limitation in Applicant’s disclosure. For the purposes of applying prior art, the examiner interprets “deadlock conditions” as a set of processes is deadlocked if each process in the set is waiting for an event that only another process in the set can cause (including itself).

Clarification/correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 5, 6, 8, 13, 33, 34, 37- 38, 40, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by McKaskle et al., (“McKaskle”, US 5,481,741).

As per independent **claim 1**, McKaskle teaches an automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) converting processing operations and decision operations of said multi-nodal process into a data structure, (b) analyzing said data structure for identifying a first group of processing

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operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure, (c) traversing said data structure to generate an ordered sequence of processing operations for visual representation (Fig.8A, col.14, lines 15-67); and (d) generating a diagrammatic representation of said ordered sequence including orienting successive processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension, and linking each processing operation of said second group to a further processing step of said processing steps according to a decision operation of said two or more decision operations (Fig.150B, col.64, lines 51-64) .

As per **claim 2 and claim 6**, McKaskle teaches associating a first visual attribute to said processing operations in said first selected group, a second visual attribute to said processing operations in said second selected group, and a third visual attribute to said processing operations in said third group (col. 5, lines 46-61).

As per **claim 5**, which is dependent on claim 1, McKaskle identifying a third group of processing operations that repeatedly appear in said data structure (Fig.8A, col.14, lines 15-67).

As per **claim 8**, which is dependent on claim 1, McKaskle teaches reading an input file containing said processing operations and said decision operations for said multi-nodal process, said processing operations and said decision operations being arranged into a plurality of records each of said plurality of records containing a first processing operation, a second processing operation and a decision operation (Fig.7, *input registers*, col.14, lines 20-23).

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As per **claim13**, which is dependent on claim 1, McKaskle teaches writing an output file for said generated diagrammatic representation of said multi-nodal process (Fig.7, *output registers*, col.14, lines 23-33).

Claim 33 is similar in scope to claim 1, and therefore is rejected under similar rationale.

Claim 34 is similar in scope to claim 2, and therefore is rejected under similar rationale.

Claim 37 is similar in scope to claim 5, and therefore is rejected under similar rationale.

Claim 38 is similar in scope to claim 6, and therefore is rejected under similar rationale.

Claim 40 is similar in scope to claim 8, and therefore is rejected under similar rationale.

Claim 45 is similar in scope to claim 13, and therefore is rejected under similar rationale.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 4, 7, 9, 14-26, 29, 35-36, 39, 41, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKaskle et al., ("McKaskle", US 5,481,741) in view of Nichols et al., ("Nichols", US 6,138,150).

As per claims **3, 4, and 7**, McKaskle teaches the invention substantially as claimed. However, McKaskle does not teach wherein said first visual attribute is a first color, said second

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visual attribute is a second color, and third visual attribute is a third color. Nichols teaches wherein said first visual attribute is a first color, said second visual attribute is a second color, and third visual attribute is a third color (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to include assigning color attributes of Nichols in the method of McKaskle because it would make the status of the corresponding attributes more distinguishable to the user.

As per **claim 9**, which is dependent on claim 8, McKaskle teaches the invention substantially as claimed. However, McKaskle does not teach exporting from a database into an input file in a client/server environment. Nichols discloses a method of flowcharting wherein exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file (col.1, lines 37-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to include exporting data from an external database to an input file on the server with McKaskle's method to allow data exchange remotely from client to server.

As per **claim 14-16**, which is dependent on claim 13, McKaskle teaches the invention substantially as claimed. However, McKaskle does not teach the graphical display of data flow diagrams in a web-enabled browser. Nichols teaches a process flow diagram wherein said output file is written in a markup language for presentation in a web-enabled browser (col.3, lines 13-21) and transmitted over a communications network (Fig.2) such as the Internet (Fig.2, col.4, lines 19-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the use of the web-enabled browser with McKaskle's method to provide a

manageable, user-friendly flowcharting display over a communications network that is accessible to more users.

As per independent **claim 17**, McKaskle teaches (i) a mechanism for converting processing operations and decision operations of said multi-nodal process into a data structure; (ii) a mechanism for analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure; and (iii) a mechanism for traversing said data structure to generate an ordered sequence of processing operations for visual representation; (iv) a mechanism for generating a diagrammatic representation of said ordered sequence including orienting said processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension, and linking each processing operation of said second group to a further processing step of said processing steps according to a decision operation of said two or more decision operations (Fig.8A, col.14, lines 15-67).

However, McKaskle does not teach a graphical display of flowcharts in a client/server environment. Nichols teaches a graphical display of flowcharts wherein (a) a server interconnected via a communications network to a client (Fig.2, *server 6*, col.4, lines 19-36), and (b) said client for receiving said generated diagrammatic representation of said multi-nodal process via said communications network in a form for presentation by said client. Nichols teaches a graphical display of flowcharts in client server (Fig.2, *client 4*, col.4, lines 19-36).

Claim 18 is similar in scope to claim 2, and therefore is rejected under similar rationale.

Claim 19 is similar in scope to claim 3, and therefore is rejected under similar rationale.

Claim 20 is similar in scope to claim 4, and therefore is rejected under similar rationale.

Claim 21 is similar in scope to claim 5, and therefore is rejected under similar rationale.

Claim 22 is similar in scope to claim 6, and therefore is rejected under similar rationale.

Claim 23 is similar in scope to claim 7, and therefore is rejected under similar rationale.

Claim 24 is similar in scope to claim 8, and therefore is rejected under similar rationale.

Claims 25 and 41 are similar in scope to claim 9, and therefore is rejected under similar rationale.

Claim 26 is similar in scope to claim 10, and therefore is rejected under similar rationale.

Claim 29 is similar in scope to claim 13, and therefore is rejected under similar rationale.

Claim 35 is similar in scope to claim 3, and therefore is rejected under similar rationale.

Claim 36 is similar in scope to claim 4, and therefore is rejected under similar rationale.

Claim 39 is similar in scope to claim 7, and therefore is rejected under similar rationale.

Claim 41 is similar in scope to claim 9, and therefore is rejected under similar rationale.

Claims 46-48 are similar in scope to claims 14-16, respectively, and therefore are rejected under similar rationale.

10. Claims 10 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKaskle.

As per **claim 10**, which is dependent on claim 1, McKaskle teaches the invention substantially as claimed. However, McKaskle does not explicitly teach detecting deadlock conditions. Official Notice is given that detecting deadlock conditions is notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to include this detection feature with McKaskle's method in order to prevent a circular wait condition of processing operations.

Claim 42 is similar in scope to claim 10, and therefore is rejected under similar rationale.

11. Claims 11-12 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKaskle in view of Mayhew et al. ("Mayhew", US 6,239,800).

As per **claims 11 and 12**, which are dependent on claim 1, McKaskle teaches the invention substantially as claimed. However, McKaskle does not expressly teach aligning processing operations in a vertical and horizontal dimension. Mayhew teaches a graphical representation of flowcharts wherein the linking of each processing operation of said second group includes aligning said processing operation to said further processing step in said vertical dimension (col.3, lines 4-26) and wherein said each successive processing operation is offset in said horizontal dimension relative to an immediate prior processing operation (col.3, lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the vertical and horizontal dimensions in the method of McKaskle to provide a more

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intuitive graphical representation which clearly shows the relationship between the process operations and how they are linked.

Claims 43 and 44 are similar in scope to claims 11 and 12, and therefore are rejected under similar rationale.

12. Claims 27-28, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKaskle et al., ("McKaskle", US 5,481,741) in view of Nichols et al., ("Nichols", US 6,138,150) and view of Mayhew al. ("Mayhew", US 6,239,800).

As per claims 27-28, which depends on claim 17, McKaskle teaches the invention substantially as claimed. However, McKaskle does not expressly teach aligning processing operations in a vertical and horizontal dimension. Mayhew teaches a graphical representation of flowcharts wherein the linking of each processing operation of said second group includes aligning said processing operation to said further processing step in said vertical dimension (col.3, lines 4-26) and wherein said each successive processing operation is offset in said horizontal dimension relative to an immediate prior processing operation (col.3, lines 4-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the vertical and horizontal dimensions in the method of McKaskle to provide a more intuitive graphical representation, which clearly shows the relationship between the process operations, and how they are linked.

Claims 30-32, which depends on claim 28, is similar in scope to claims 14-16, and therefore are rejected under similar rationale.

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13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McKaskle et al., US 5,481,741, teaches a graphical data flow environment.

Nichols et al., US 6,138,150, teaches process flow diagrams via the Internet with a web browser.

Mayhew et al., US 6,239,800, teaches display of flowcharts with a vertical and horizontal dimension.

Lanier et al., US 5,588,104, teaches creating virtual worlds using a data flow network.

Okita et al., US 6,225,998, teaches visual design of workflows.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T Nguyen whose telephone number is (703) 305-8649. The examiner can normally be reached on Mon.-Fri. (7:00 a.m.- 4:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Anh T Nguyen
Examiner
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